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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,474

01/15/2004

Edward A. Pazmino

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09/09/2004

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EXAMINER

ALAVI, AMIR

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,474

Applicant(s)

PAZMINO ET AL.

Examiner

Amir Alavi

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11 and 13-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11 and 15-26 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 15 January 2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Double Patenting

- The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
- A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).
- Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).
- Claims 1,6,13-20 and 22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,731,807 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because, even though the claims of the instant invention are broader than the claims of the aforementioned patent, however essentially these claims are contained within the claims of The patent.

Claim Rejections - 35 USC § 102

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- Claims 1-2, 4-11, 15, 19-23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Virtamo et al. (US 5,692,012).

Regarding claim 1, Virtamo et al. disclose, compressing the data set in multiple passes (In this regard, multiple passes consists of two passes, the first pass of categorizing each data signal, and the second pass of, for selected categories coding the data signal using a codebook for that category) by categorizing each data signal in the data set into a category of a predetermined set (Please note, figures 2 and 3 in correlation to, column 5, lines 54-67. As indicated by using as classifiers (i.e. categorizers) the vector index *i* of the original block 13 (i.e. the data set) and the quadrants label A', B', C' and D' (i.e. a category of a predetermined set) of the subblock

14, i.e. its location inside the original block 13, the underlined being indicative of categorization of sub-blocks A', B', C', D', via their respective locations inside the original block 13), and, for selected categories of the predetermined set, coding the data signals for that category using a codebook for that category. (Please note, figures 2 and 3 in correlation to column 3, lines 30-41; column 5, lines 54-67 and column 6, lines 1-9. As indicated in coding sub-block 14, there is utilized, from among the classified codebooks 20, that particular codebook which is defined by the label of each quadrant 14 of the original block 13).

Regarding claim 2, Virtamo et al. disclose, decompressing the data set by, for compressed data signals in the data set in a category of a predetermined set of categories, employing a particular data signal associated with the particular category (Please note, figure 5, in correlation to column 7, lines 3-17. As indicated the image block is first reconstructed in the sub-coder 16, 19 on the basis of the information coded so far), and, for selected categories of the predetermined set, decoding the compressed data signals for that category using a codebook for that category. (Please note, figure 4, in correlation to column 6, lines 10-34. As indicated the image that is coded and further transmitted at the transmitting end, is at the receiving end decoded by a simple reversed decoding process. The combined codebook 24 of the receiving end contains codebooks that are identical with the codebooks 17, 20 and 22 of the transmitting end).

Regarding claim 4, Virtamo et al. disclose, wherein for compressed data signals in the data set in one of a predetermined set of categories, employing a

data signal associated with the particular category for the compressed data signal (Please note, figures 2 and 3 in correlation to, column 5, lines 54-67. As indicated by using as classifiers (i.e. categorizers) the vector index i of the original block 13 (i.e. the data set) and the quadrants label A', B', C' and D' (i.e. a category of a predetermined set) of the subblock 14, i.e. its location inside the original block 13, the underlined being indicative of categorization of sub-blocks A', B', C', D', via their respective locations inside the original block 13), and, for selected categories of the predetermined set, decoding the compressed data signals for that category using a codebook for that category. (Please note, figure 4, in correlation to column 6, lines 10-34. As indicated the image that is coded and further transmitted at the transmitting end, is at the receiving end decoded by a simple reversed decoding process. The combined codebook 24 of the receiving end contains codebooks that are identical with the codebooks 17, 20 and 22 of the transmitting end).

Regarding claim 5, Virtamo et al. disclose, wherein the decompression is performed in multiple passes. (Please note figure 1, as shown at the receiving end the decoding is the identical operation of the coding, that is it is done in multiple passes).

Regarding claim 6, Virtamo et al. disclose, wherein In multiple passes (In this regard, multiple passes consists of two passes, the first pass of categorizing each data signal, and the second pass of, for selected categories coding the data signal using a codebook for that category), categorizing each data signal in the data set into a

category of a predetermined set (Please note, figures 2 and 3 in correlation to, column 5, lines 54-67. As indicated by using as classifiers (i.e. categorizers) the vector index i of the original block 13 (i.e. the data set) and the quadrants label A', B', C' and D' (i.e. a category of a predetermined set) of the subblock 14, i.e. its location inside the original block 13, the underlined being indicative of categorization of sub-blocks A', B', C', D', via their respective locations inside the original block 13), and, for selected categories of the predetermined set, coding the data signals for that category using a codebook for that category. (Please note, figures 2 and 3 in correlation to column 3, lines 30-41; column 5, lines 54-67 and column 6, lines 1-9. As indicated in coding sub-block 14, there is utilized, from among the classified codebooks 20, that particular codebook which is defined by the label of each quadrant 14 of the original block 13).

Regarding claim 7, Virtamo et al. disclose, wherein the data signals comprise binary digital signals. (Please note, column 2, line 52).

Regarding claim 8, Virtamo et al. disclose, wherein for the categories that are not coded, each data signal in that category is represented as the binary digital signals assigned to that category. (Please note, column 2, line 52).

Regarding claim 9, Virtamo et al. disclose, wherein the number of predetermined categories is a power of two (Please note, figures 2 and 3).

Regarding claim 10, Virtamo et al. disclose, wherein the codebook for each of the selected categories is different. (Please note, column 5, lines 54-67. As

indicated having a classified codebook, an indication of selected categories, if the selected categories are different the codebook would be different).

Regarding claim 11, Virtamo et al. disclose, wherein the codebook for each of the selected categories is the same. (Please note, column 5, lines 54-67. As indicated having a classified codebook, an indication of selected categories, if the selected categories are the same the codebook would be the same).

Regarding claim 15, Virtamo et al. disclose, wherein the data set is compressed for storage on a storage medium. (Please note, figure 1, element 2).

Regarding claim 19, Virtamo et al. disclose, wherein the data set comprises data representing one of an image, audio signals, a sequence of images, and any combination thereof. (Please note, column 6, line 2).

Regarding claims 20 & 21, arguments analogous to those presented for claim 1 are applicable.

Regarding claim 22, arguments analogous to those presented for claim 6 are applicable.

Regarding claim 23, arguments analogous to those presented for claims 5 & 6 are applicable.

Regarding claim 25, arguments analogous to those presented for claim 15 are applicable.

Claim Rejections - 35 USC § 103

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Virtamo et al. (US 5,692,012) in view of Voois et al. (US 124,882).

Regarding claim 16, Virtamo et al. disclose, compressing the data set in multiple passes (In this regard, multiple passes consists of two passes, the first pass of categorizing each data signal, and the second pass of, for selected categories coding the data signal using a codebook for that category) by categorizing each data signal in the data set into a category of a predetermined set (Please note, figures 2 and 3 in correlation to, column 5, lines 54-67. As indicated by using as classifiers (i.e.

categorizers) the vector index i of the original block 13 (i.e. the data set) and the quadrants label A', B', C' and D' (i.e. a category of a predetermined set) of the sub-block 14, i.e. its location inside the original block 13, the underlined being indicative of categorization of sub-blocks A', B', C', D', via their respective locations inside the original block 13), and, for selected categories of the predetermined set, coding the data signals for that category using a codebook for that category. (Please note, figures 2 and 3 in correlation to column 3, lines 30-41; column 5, lines 54-67 and column 6, lines 1-9. As indicated in coding sub-block 14, there is utilized, from among the classified codebooks 20, that particular codebook which is defined by the label of each quadrant 14 of the original block 13).

However, Virtamo et al. do not specifically disclose, wherein the storage medium comprises a flash chip.

On the other hand, Voois et al., in the same field of endeavor, disclose a nonvolatile, electrically erasable programmable memory, such as a flash memory (Please note, column 4, lines 1-3).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize this flash chip of Voois et al. into Virtamo et al.'s invention because such memory is a nonvolatile, electrically erasable programmable memory and because Virtamo et al. deals with block coding, utilization of a flash memory because of its block oriented nature would have been advantageous.

- Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virtamo et al. (US 5,692,012) in view of Feo et al. (US 5,717,787).

Regarding claims 17 and 18, Virtamo et al. disclose, compressing the data set in multiple passes (In this regard, multiple passes consists of two passes, the first pass of categorizing each data signal, and the second pass of, for selected categories coding the data signal using a codebook for that category) by categorizing each data signal in the data set into a category of a predetermined set (Please note, figures 2 and 3 in correlation to, column 5, lines 54-67. As indicated by using as classifiers (i.e. categorizers) the vector index *i* of the original block 13 (i.e. the data set) and the quadrants label A', B', C' and D' (i.e. a category of a predetermined set) of the subblock 14, i.e. its location inside the original block 13, the underlined being indicative of categorization of sub-blocks A', B', C', D', via their respective locations inside the original block 13), and, for selected categories of the predetermined set, coding the data signals for that category using a codebook for that category. (Please note, figures 2 and 3 in correlation to column 3, lines 30-41; column 5, lines 54-67 and column 6, lines 1-9. As indicated in coding sub-block 14, there is utilized, from among the classified codebooks 20, that particular codebook which is defined by the label of each quadrant 14 of the original block 13).

However, Virtamo et al. do not specifically disclose, wherein the network comprising the Internet.

On the other hand, Feo et al., in the same field of endeavor, disclose method for data compression by associating complex numbers with files of data values, in which the transmission electronically transmits across the internet (Please note, column 6, lines 23-28). Feo et al. teach that such transmission is without error.

It is for this reason that it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize this network comprising the Internet in the data compressing and/or decompressing in Virtamo et al.

- Claim 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virtamo et al. (US 5,692,012).

Regarding claim 24, Virtamo et al. disclose, compressing the data set in multiple passes (In this regard, multiple passes consists of two passes, the first pass of categorizing each data signal, and the second pass of, for selected categories coding the data signal using a codebook for that category) by categorizing each data signal in the data set into a category of a predetermined set (Please note, figures 2 and 3 in correlation to, column 5, lines 54-67. As indicated by using as classifiers (i.e. categorizers) the vector index i of the original block 13 (i.e. the data set) and the quadrants label A', B', C' and D' (i.e. a category of a predetermined set) of the subblock

14, i.e. its location inside the original block 13, the underlined being indicative of categorization of sub-blocks A', B', C', D', via their respective locations inside the original block 13), and, for selected categories of the predetermined set, coding the data signals for that category using a codebook for that category. (Please note, figures 2 and 3 in correlation to column 3, lines 30-41; column 5, lines 54-67 and column 6, lines 1-9. As indicated in coding sub-block 14, there is utilized, from among the classified codebooks 20, that particular codebook which is defined by the label of each quadrant 14 of the original block 13).

However, Virtamo et al. do not specifically disclose any particular input device.

On the other hand, digital cameras are exceedingly well known and by utilization of a digital camera, the resulting image can be manipulated and processed much like the image from a scanner or related input devices and the fact that a digital camera is an easily portable device.

It is for this reason that it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize this digital camera in the data compressing and/or decompressing in Virtamo.

Regarding claim 26, arguments analogous to those presented for claim 24 are applicable.

Allowable Subject Matter

- Claims 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
- The following is an examiner's statement of reasons for allowance: None of the prior art teach or fairly suggest, wherein the data signals are coded so that a predetermined binary digital signal budget is not exceeded and the categories have a rank order.

Art Unit: 2621

Contact Information

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amir Alavi whose telephone number is (703) 306-5913.
- The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 6:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached at (703) 305-4706.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

or faxed to:

(703) 872-9306, or (703) 308-9052 (for **formal** communications; please mark

"EXPEDITED PROCEDURE")

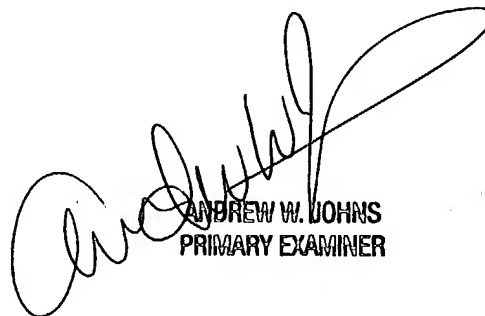
or:

(703) 306-5406 (for **informal** or **draft** communications, please label "PROPOSED" or "DRAFT")

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 305-4750.

AA
Group Art Unit 2621
27 August 28, 2004


ANDREW W. JOHNS
PRIMARY EXAMINER